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WHAT THE RESEARCH SAYS ABOUT TEACHING THE EDUCABLE MENTALLY RETARDED IN THE REGULAR CLASSROOM.

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THIS STUDY OF THE LITERATURE HAS AS ITS MAIN PURPOSE THE PUBLICATION OF A FUNCTIONAL TEACHING GUIDE FOR TEACHERS WITH EDUCABLE MENTALLY HANDICAPPED (EMH) STUDENTS IN REGULAR CLASSROOMS. THE GUIDE IS ORGANIZED AROUND A SERIES OF QUESTIONS--(1) WHO ARE THE EDUCABLE MENTALLY HANDICAPPED, (2) HOW CAN THEY BE IDENTIFIED AND EDUCATIONAL OBJECTIVES FORMULATED, (3) IN WHAT GENERAL WAYS CAN THE REGULAR CLASSROOM TEACHER HELP THEM, (4) WHAT ARE GENERAL AND SPECIFIC TEACHING TECHNIQUES, (5) HOW CAN PROGRESS BE EVALUATED, AND (6) WHAT FEDERAL AIDS ARE AVAILABLE. A NUMBER OF CHARACTERISTICS ARE DESCRIBED, AND TECHNIQUES AND PROCEDURES WHICH HAVE PROVED USEFUL IN TEACHING EMH CHILDREN ARE PRESENTED. A BIBLIOGRAPHY OF 45 ITEMS IS INCLUDED. (DF)

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"Better School Programs Through Research"

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U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

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Edited by

Berlie J. Fallon

INTRODUCTORY STATEMENT

In the early fall of 1965 the Board of Directors of the West Texas School Study Council requested a study of methods of teaching the educable mentally retarded child. This study was conceived to be a concentrated literature survey which would culminate in the publishing of a functional teaching resource for regular classroom teachers who do not have a great deal of specialized training in this field.

The writers of the study were Bill Butefish, doctoral student at Texas Tech and Research Assistant in the West Texas School Study Council, and Dr. Bruce Mattson, Associate Professor of Education and Head of Special Education Programs at Texas Tech.

The organization of the study, its depth in terms of the best current literature, and its timeliness in terms of the critical need for understanding of the educable mentally retarded child, all point to this piece of research as "must" reading for regular classroom teachers as well as special education teachers and supervisors. Subject supervisors and administrators can also enhance their understanding of this important area of education through reading the study.

It is hoped that this study will make its primary contribution in terms of increased educational benefits to children who, for various reasons, deserve a full measure of special attention in order to become self-actualizing.

Berlie J. Fallon
Executive Secretary

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I. WHO ARE THE EDUCABLE MENTALLY RETARDED?

Introduction - The educable mentally retarded are in need of the public schools' help. Many educable mentally retarded children in the United States do not receive the advantages of Special Education and trained personnel. They are enrolled in the regular school programs and are thus limited to a program which is geared to the needs of "normal" children.

The major responsibility for helping the educable mentally retarded in the regular classroom lies with the classroom teacher. This situation is obviously a paradox. The classroom teacher is trained to guide and develop "normal" children, and has no specialized training for helping retarded children. The retarded child is not prepared to compete in the classroom situation provided by the teacher, hence the paradox. The classroom teacher has a desire to help all children and is naturally frustrated in feeling that the educable mentally retarded are beyond the abilities of a classroom teacher. This is not necessarily the case, however. There are some ways in which the educable mentally retarded can be aided in the regular classroom. It is the purpose of this report to reveal the siftings of research which can be helpful to regular classroom teachers and their co-workers in working with retarded and slow-learning children.

The organization of the report is based upon a logical sequence of questions that might be asked by a classroom teacher faced with the challenge of aiding educable mentally retarded children. The questions are: "Who are the educable mentally retarded?", "How can the educably mentally retarded be identified and objectives

for their education formulated?", "In what general areas can the regular classroom teacher help the educable mentally retarded?", "What are the techniques for teaching retarded children?", "How has the federal government helped in educating retarded children?", and "How can the progress of the educable mentally retarded be evaluated?"

Description Using IQ Tests - There are several methods for determining who are the mentally retarded. One of the most obvious of these methods is the use of psychological tests of mental ability, the IQ tests. The American Association on Mental Deficiency distinguishes four degrees of mental retardation in relation to IQ. The four degrees of regardation are the totally dependent mentally retarded, the trainable mentally retarded, the educable mentally retarded, and slow learners. (3)

The totally dependent mentally retarded make up about .1% of the total population. These individuals, because of markedly subnormal intelligence, cannot be trained in self-care, socialization, or economic usefulness. They require constant attention in taking care of their personal needs. The totally dependent retardates cannot profit from training or educational programs. Their IQ scores do not exceed 30.

The trainable mentally retarded make up about .4% of the total population of the United States. The IQ range which distinguishes this group is from 30 to 50. Individuals classified as trainable mentally retarded are subnormal to the degree that they cannot profit from the classes which have been devised for the

educable mentally retarded. It is obvious then, that they certainly cannot adjust to a regular classroom. They are capable of learning self-care in activities such as eating, dressing, undressing, toileting and sleeping. They are capable of learning to adjust to activities in the home and neighborhood, but have difficulty in adjusting to the total community. Individuals with IQ's in the upper ranges of the 30 to 50 spread can develop economic usefulness in the home, a sheltered workshop or an institution.

The educable mentally retarded, the subject of this investigation, compose approximately 4% of the total population. There is much disagreement among educators and psychologists as to the adaptability of educable mentally retarded children to the regular classroom; nevertheless, these children <u>are</u> found in regular classrooms. It has been demonstrated that the educable mentally retarded are capable of minimum educability in reading, writing, spelling, and arithmetic. Most have the capacity for social adjustment to the point that they can successfully live on an independent basis in the community. Their independence includes being able to support themselves partially or even totally at a marginal level. The IQ's of the educable mentally retarded range from 50 to 75 or 80.

The fourth degree of mental retardation described by the American Association on Mental Deficiency is described as that of the slow learner. This group comprises about 17% of the total population. There is some hesitancy on the part of the Association to class slow learners as retardates since they are capable of succeeding in classrooms where provisions are made for their differences in

ability. The IQ range of the individuals within this group runs from 75 to 85 or 90. Slow learners can readily become self-supporting, independent, and socially adjusted. (3) Two authorities in the field of mental retardation describe slow learners in this manner:

> When we refer to slow learners, we are referring to those with IQ's from 75-90 who are in the regular classroom... He (the slow learner) is one whose mental ability is high enough to justify keeping him in the regular classroom but low enough to give considerable difficulty in keeping up with the average speed of the class. (21:14)

One author sees the slow learner as the greatest problem to be faced by the public schools. Barbe suggests that the large number of children who fall into this category is the reason for the urgency of the problem. He states: "To expect this child to perform like the average is unrealistic and frustrating both for the teacher and the child." The public schools have accepted the responsibility for helping these children, and provisions for meeting their needs is of vital importance. (6:104-105)

It should be pointed out that the arbitrary separation marks on an IQ scale are just that. No sharp differences exist between a trainable mentally retarded individual with an IQ of 49 and an educable mentally retarded individual with an IQ of 51. The groups designated by IQ's are not sharply separated at their limits, but fuse together in an even pattern. It is wise to remember that the groups into which human beings are separated, like IQ groups, are man made. We may describe generally the characteristics of such a group, but toward the outer limits of the IQ range of any group the members may be indistinguishable.

We should also recognize that there are other means of classifying mental deficiencies:

> Physicians classify according to cause of defect, social workers according to degree of adjustment or independence; psychologists according to the degree of deficit as indicated by mental measurements; and educators according to the rate of learning or degree to which an educational program is affected. (3)

Description Using the Criterion of Social Incompetence - An interesting concept for classifying mentally deficient individuals is proposed by E. A. Doll. Doll would distinguish between "feeblemindedness" and "intellectual retardation" on the basis of social incompetence. According to Doll, feeblemindedness is characterized by an incurable state; one in which the affected individual can never achieve competence in society. Intellectual retardation is characterized by the possibility of the individual becoming socially competent to some degree. Apparently Doll would rely less upon IQ tests and mechanical devices for identifying retardates, and more upon retardates' ability to adjust to the environment produced by society. (15:93)

A more sophisticated identification of mental retardates using social incompetence as a criterion is reported by Jordan. (19) Jordan cites Benoit from an article entitled "Relevance of Hebb's Theory of the Organization of Behavior to Educational Research on the Mentally Retarded," which appeared in the American Journal of Mental Deficiency in 1959. Benoit views mental retardation this way:

> Mental retardation may be viewed as a deficit of intellectual function resulting from varied intrapersonal and/or extrapersonal determinants, but having as a common proximate cause

> a diminished efficiency of the nervous system, thus entailing a lessened general capacity for growth in perceptual and conceptual integration and consequently in environmental adjustment. (19:23)

From this angle then, the criterion for determining retardation is the degree to which the individual can perceive situations in his environment and adjust to their influence on his world. It is important to note that the criterion does not depend upon narrow aspects of the retardates abilities, but rather upon his total ability to succeed at his own level in the world about him.

The technical Planning Project of the American Association of Mental Deficiency also revealed the need for including social adjustment as a criterion for determining retardation. The Planning Project isolated impairment in three areas as essential in identifying retardates. The three areas are: (1) impairment in maturation, (2) impairment in learning, and (3) impairment in social adjustment. These three areas are weighed in terms of the behavioral standards and norms for the individual's chronological age group. (19:24)

A. F. Tredgold goes possibly a step beyond the social proficiency expected by others in stating that mental retardation is

> ...a state of incomplete mental development of such a kind and degree that the individual is incapable of adapting himself to the normal environment of his fellows in such a way as to maintain existence independently of supervision, control, or external support. (15:93)

From Tredgold's point of view, any individual capable of carrying on an independent existence in society should not be classed as a mental retardate.

Thus we see that to some authorities in the field of mental

deficiency, mental retardation is not based solely upon an IQ score, but on a larger scope of the individual's characteristics. Some writers in the field and even some clinical workers have been prone to define retardation in terms of an IQ score of below 70.(15:92) The trend seems to be moving away from this aspect of diagnosis and toward the inclusion of more social factors.

Description of Retardation Using Educability as a Criterion - Orville G. Johnson in Education for the Slow Learners looksat mental retardation in the focus applicable to use by educators. Johnson identifies three groups of the mentally retarded in terms meaningful in school situations. He sees the mentally retarded as those children with any significant degree of mental retardation. This group includes children who can achieve no academic skills and those approaching normalcy. The mentally retarded make up approximately 20 per cent of the school population. (18:7) Johnson's three subgroups of the mentally retarded are the mentally deficient, the mentally handicapped, and the slow learners.

The mentally deficient make up about .5% of the general population and about 2½% of the total group of mentally retarded. The children in this group are unable to benefit in any way from the offerings of the public schools. The individuals in this group often have one or more physical anamolies in addition to the intellectual retardation. The mentally deficient are incapable of becoming

socially or economically independent and need personal supervision throughout life.

Johnson's second group of retardates, in relation to educability, is termed the mentally handicapped. This sub-group includes individuals capable of attaining mental growth of from 7 years 6 months to 11 years. Unlike the mentally deficient, the mentally handicapped are relatively normal in their physical and motor development. They differ from the mentally deficient in yet another respect. The mentally handicapped <u>are</u> educable. The individuals in this sub-group can learn basic academic skills and can also learn to apply those skills. This sub-group makes up about 2 to 3 per cent of the total population, or about 10 to 15 per cent of the total group of mentally retarded. The mentally handicapped are capable of living independently, supporting themselves, and becoming contributing members of society. (18:8-9).

The slow learners comprise Johnson's third sub-group of the mentally retarded. The sub-group makes up about 17 per cent of the total population, or 80 to 85 per cent of the mentally retarded. Johnson states that a normal class of thirty unselected children in a public school can be expected to contain four or five slow learners. These slow learners cannot be expected to achieve mental growth exceeding 13 years 6 months. Johnson suggests that this particular sub-group is in danger of being overlooked since they have many characteristics in common with children of greater abilities. Concerning the slow learners, Johnson states: "Since they are a very large group and since they do not deviate as markedly from the average as do the

other groups of mentally retarded children, special educational provisions have not been considered essential." (18:9)

Terms Used in Referring to the Mentally Retarded - The literature concerning the mentally retarded contains a proliferation of terms used in referring to children who function at an intellectual level below normal. As in most technical fields, terms are not meaningful in themselves, but an understanding of how terms are used in a frame of reference makes them meaningful. A teacher interested in studying the literature in order to help mentally retarded children who enter his class needs some familiarity with such terms. Some of the many terms found in the literature are: mental defective, mentally subnormal, mentally retarded, intellectually defective, intellectually subnormal, intellectually retarded, oligophrenic, feebleminded, amental, exceptional, and slow learning. Of these terms, the one most commonly misunderstood is "exceptional." It is surprising to note the number of public school people who have the erroneous notion that the term "exceptional children" is synonymous with "gifted children." Kirk clears this misconception by stating:

> The term 'exceptional child' has been generally accepted...to mean either the handicapped or the gifted child: (1) the child who has a physical handicap, such as a crippling condition, deafness, or blindness; (2) the child who deviates mentally, whether he is very bright or very dull or mentally retarded; and (3) the child who is maladjusted or emotionally disturbed. (20:4)

In the development of means by which retarded children could be identified and described, certain negative connotations have accompanied terms used in the field of mental retardation. These terms and their negative connotations have helped stigmatize the mentally

retarded. In the past, the mentally retarded having IQ's of 0-25 have been termed "idiots"; and those having IQ's of 50-70, "morons." These terms are outdated, and terms used now are based more upon educational prognosis. The terms now used indicate the type of educational program which would be likely to produce the best results. The group once referred to as "morons" are now called "educably mentally retarded." The latter term is positive in that the individuals in this group are educable, even to a limited degree. The group once referred to as "imbeciles" are now called "trainable mentally retarded." The implication for positiveness here is that even though individuals within the group lack potential for school learning in the formal sense, they are still capable of benefiting from other types of "training" processes.

Those persons dealing with retarded children in terms of social adaptability have still other terms for use in description. As has been pointed out previously, the various disciplines have devised their own terms in relation to their point of interest in the mentally retarded. The social-oriented workers use such terms as "marginal independent," "marginal dependent," and "dependent," depending upon the degree to which the individual can carry on an independent existence in society.

Summary - There are many intellectually retarded children in the public schools of the United States who do not receive the advantages of trained teachers in Special Education. It is left to the regular classroom teacher to provide a program through which these retarded children can progress.

Identification of the mentally retarded becomes one of the first considerations in the teacher's process of aiding these children. The most widely recognized tool for identifying the exceptional child is the IQ test. The commonly accepted IQ scores for identifying and classifying the mentally retarded are 0-30 (totally dependent mentally retarded), 30-50 (trainable mentally retarded), 50-75 (educable mentally retarded), and 75-90 (slow learners). Sharp differentiations do not exist at the limits of these sub-groups. The identifiable characteristics of the sub-groups change gradually as the continuum of IQ scores ranges wider.

The professional groups interested in the educable mentally retarded classify the retarded according to the criterion with which the discipline of their profession deals. The medical profession classifies the retarded in terms of the cause of the mental defect. Sociologists classify the mentally retarded in terms of the degree to which the mentally retarded can adjust to an independent existence in society. Educators classify the mentally retarded in terms of their ability to profit from the programs of the public schools.

The profusion of terms which refer to the mentally retarded has led to some confusion in identification. One of the terms not universally understood is "exceptional child." An exceptional child is one who differs in some degree from a normal child. The exceptional child may be intellectually retarded, intellectually gifted, physically handicapped, or emotionally handicapped.

II. HOW CAN THE EDUCABLE MENTALLY RETARDED BE IDENTIFIED AND OBJECTIVES FOR THEIR EDUCATION FORMULATED?

Identification Through Testing - Throughout the literature concerned with mentally retarded children is found the opinion that the earlier retardation is detected, the better chance a child has for effective adjustment. To those who are not familiar with the characteristics of the mentally retarded, especially the educable mentally retarded and the slow learners, early identification seems to be an easy task. Identification early in life is not easy. There is usually a slower rate of development among the retarded, but it is so slight with the educable mentally retarded and slow learners that it is easily overlooked. As a result of this oversight, retardation is often recognized in the early years at school rather than at home. Kirk explains the situation in this manner:

> Educable mentally retarded children are usually not recognized as mentally retarded at the preschool level. Although they are slightly delayed in talking, language, and sometimes walking, the retardation is not so great as to cause alarm on the part of the parents. Most of these children are not known to be mentally retarded until they enter school and begin to fail in learning the required subject matter. (20:105)

The test of mental ability, the IQ test, is still one of the most reliable tools for determining intellectual exceptionality. Intellectual exceptionality in this sense meaning an over-all intellectual capacity which indicates learning rates not within the average range.

There seems to be a general concensus among educators and psychologists that the results of IQ tests are fairly reliable and as accurate at predicting academic success as any tool they possess.

Psychologists and educators agree that the IQ test does have limitations and these limitations need to be understood. They especially need to be understood by classroom teachers who have access to the IQ scores of the children ir their class. In the first place, individual tests are far more reliable and valid than group tests. Second,

> ...they make a valuable contribution to the understanding of an individual child when used as a measure of status attained and have fair value as predictors of future mental development. To read more into the test results is to make oneself susceptible to great error and vulnerable to criticism. (6:10)

The point being made here is that classroom teachers, and other school personnel, should take precautions against reading more into an IQ score than is actually present. This is especially true in the use of group tests.

Barbe has pointed out in the quotation immediately preceding that reading more meaning into an IQ score than is actually present can lead to criticism. Criticism of the teacher is not the only possibility. Irreparable damage to children can be the consequence of a classroom teacher reading too much into a group intelligence test score.

One of the traits of a really good teacher is sensitivity to situations which are beyond his training and capabilities and calling for help when these situations arise. In the case of the classroom teacher who suspects that a retardation problem exists, the school administrator and the parents should be notified through proper channels. Many school systems now employ professional personnel who are capable of administering an individual intelligence

test. If no such personnel exist, then school authorities and/or the parents should determine the availability of a qualified guidance or mental health clinic. The important factor here is: identification and diagnosis of retarded children beyond the point of group intelligence tests in school is the work and responsibility of professionals who are trained for that purpose. (41:23) Barbe makes this observation: "In identifying the intellectually exceptional child the group test is only an indication and a beginning, the first step in a screening process. Individual testing is a necessary next step." (6:10)

There are some good procedures which should be followed when group IQ tests are given to identify mentally exceptional children. These factors are:

(1) The examiner should be a person familiar to the children. The classroom teacher should be well enough acquainted with the testing procedure to administer the test to her own children, if at all possible.
(2) Testing should not occur before the children have become acquainted with one another and with the teacher.
(3) The use of answer sheets separate from the test booklet itself is questionable with primary grade children of all levels of ability, and with children suspected of limited mental ability of all age levels.
(4) The obtained IQ on a group test should be matched with that obtained on a different group test before the results are seriously considered as an indication of the child's potential. Even then, both for those far above and those far below average, the scores are only an indication that the child differs greatly from the average.
(5) In cases where there is a great discrepancy between group test results or great variation from the norm, individual testing is advisable. (6:10)

Barbe suggests that though the intelligence test is probably the best method for quantifying capabilities or weaknesses, its results probably should not be considered alone. Other factors,

like leadership, creativity, and motivation are also important in identifying the intellectually exceptional child. Teacher observation and recommendation in addition to the IQ score is recommended. Barbe goes on to say: "It is unfortunate that the area of intellectual exceptionality is left so heavily to the mercy of test results. Teacher observation should be a valuable means of assisting identification." (6:11)

Differences in General Characteristics - Observation of a group of children when used alone is a hazardous method for identifying the educable mentally retarded. Many educable mentally retarded are normal in their physical characteristics; though as a group, these children tend to have a slightly increased occurrence of physical disabilities. Concerning the physical characteristics of the educable mentally retarded, Kirk reveals that:

> (1) In height, weight, and motor coordination most educable mentally retarded children approximate normal children.
> (2) Because a small number have organic causes for the retardation, such as brain injury, these few are likely to be physically inferior to normal children.
> (3) More handicaps of vision, hearing, and motor coordination are found among the educable mentally retarded. However, a substantial number do not have such defects.
> (4) Many retarded children come from substandard homes, which are generally inferior in sanitation and attention to health matters. (20:109)

In considering the differences in learning characteristics, Cruickshank reveals a statement which requires understanding for classroom teachers. Cruickshank states: "The basic learning characteristics of the mentally retarded, summarized briefly, are in all probability the same as for normal children of approximately the same mental age." (11:461) In considering this statement, it should become apparent

that the educable mentally retarded learn in the same manner as do normal children. In fact, the search for qualitative differences in learning between normal and mentally retarded children has revealed few, if any, of these differences. No differences in learning time have been uncovered. This indicates that a ten year old retarded child with a mental age of 7 years requires no more time to learn a task than a seven year old child with a mental age of seven. Nor do the retarded children require more repetition or drill in learning than do normal children of the same mental age. "The laws of learning that hold true for the normal also hold true for the mentally retarded." (11:459) The slowness, then, in reference to retarded children, has to do with their <u>rate</u> of intellectual development, not that they comprehend slowly or grasp new concepts slowly or learn a skill slowly. Mental age, then, is the key to determining when the educable mentally retarded are able to comprehend an idea, grasp a concept, or learn a skill. (11:459)

Due in part to their disappointments and rejection, and in part to their own unique traits, the educable mentally retarded <u>do</u> have some psycho-educational characteristics which interfere with learning. These psycho-educational traits have been observed and described by several authorities, including Goldstein and Seigle (1965), Kirk and Johnson (1951), Jordan (1961), and Tizard (1958). A synthesis of the psycho-educational traits of the educable mentally retarded reveals:

(1) low performance on verbal and nonverbal intelligence tests
(2) poor retention of information
(3) language ability deficient in number and complexity of concepts, in grammar, and in ideational content

(4) learning which tends toward the concrete with markedly greater difficulty in handling abstract material
(5) proneness to frustration, leading to lowered tolerance for further frustration
(6) short attention span developed through negative training or inherent in the retardation
(7) paucity of imagination and creativity
(8) perseverative tendencies in word, thought, or deed
(9) reduction in spontaneous learnings acquired outside of formal instruction
(10) weakness in transferring or generalizing learnings (23)

Through comparative measures, we find that there is much agreement between authorities in the field as to the characteristics of the educable mentally retarded. Note the similarities in list of characteristics just mentioned and those of Magnifico:

(1) greater comprehension of the concrete than the abstract
(2) reasoning power of the mentally handicapped is limited
(3) short attention span
(4) limited power of association
(5) unrealistic attitude toward society and themselves
(6) lack of powers of self-criticism
(7) limited judgement
(8) lack of foresight
(9) possession of a greater backlog of frustration experiences
(10) satisfactory adjustment is not a characteristic of the mental retardate. (22:16)

There is disagreement among authorities on only one aspect of the learning characteristics of mental retardates. Orville G. Johnson of Syracuse University disagrees with most other writers in believing that the educable mentally retarded cannot generalize or transfer principles as well as normal children of the same mental age. Johnson asserts that there is evidence that the mentally handicapped can generalize and transfer <u>better</u> than normal children of the same mental age. (18:16)

An important study in retardation was made by Klausmeier and Check. The study concerned the relationships among 16 measures of

physical, mental, achievement, and personality characteristics in children of low, average, and high intelligence who were 10 years and 5 months of age. Those functions investigated were: height, weight, strength of grip, number of permanent teeth, bone development of hand and wrist (carpal age), IQ, reading achievement, arithmetic achievement in relation to capacity, integration of self-concept, expression of emotion, behavior pattern, and the child's estimate of his own learning abilities.

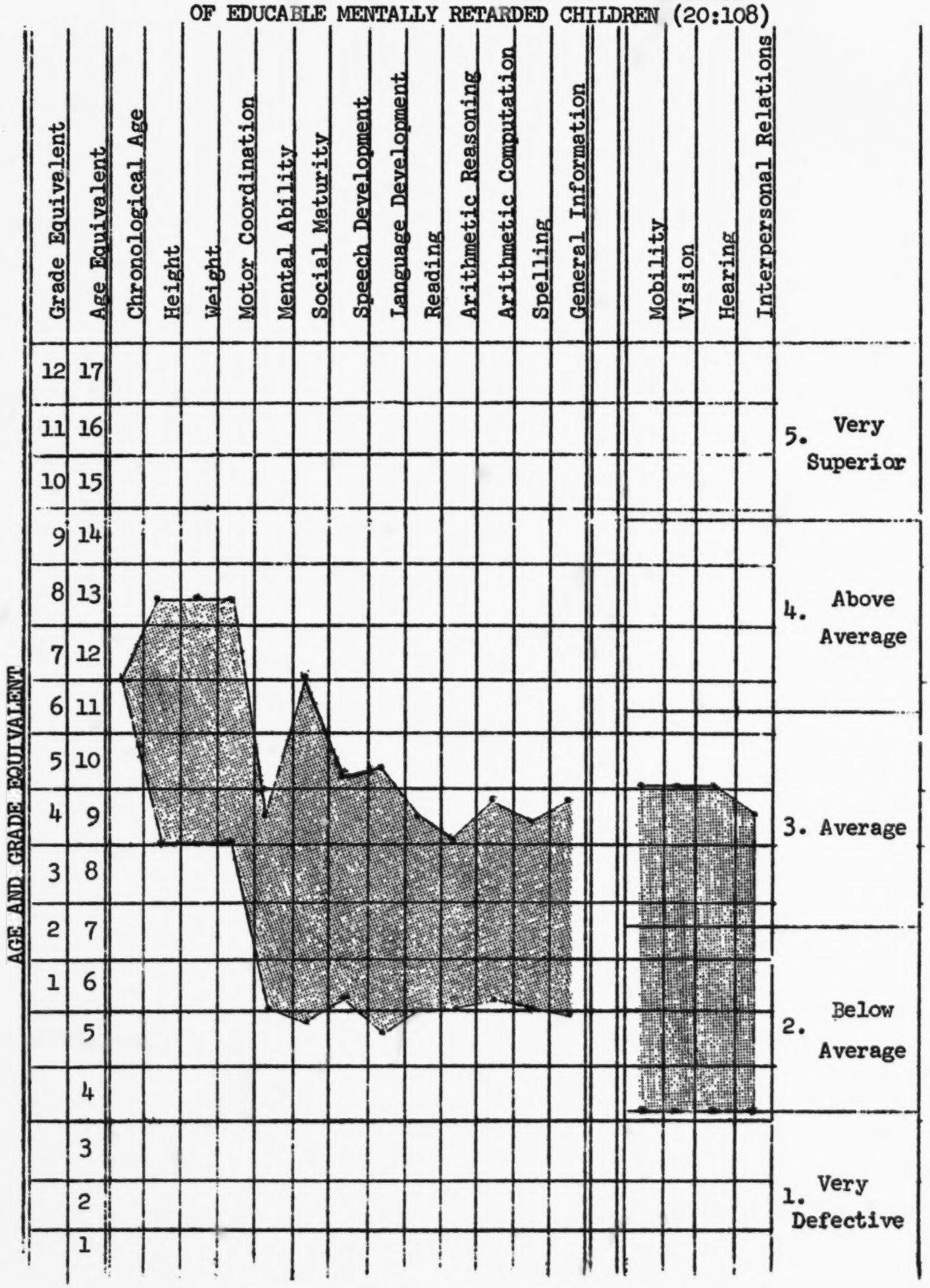
The results of this study revealed that children of low intelligence (IQ 55 to 80) were not significantly different from the average (IQ 90-110) or high group (IQ 120 or higher) in weight, number of permanent teeth, carpal age, emotional adjustment, achievement in relation to capacity, integration of self-concept, expression of emotion, behavior pattern, and estimate of own abilities. There were differences revealed as the children of lower intelligence scored less in strength of grip, reading achievement, arithmetic achievement, and language achievement. Klausmeier and Check also concluded from the study that a low level of physical development in the child does not necessarily accompany low achievement in arithmetic and reading. They also determined that "intraindividual variability for each child in three functions (reading, arithmetic, and language) was less for the average than for the high and low IQ groups." (16:57-58)

Diagnosis, then, involves the consideration of physical and learning characteristics. Diagonsis, as a process, is most meaningful in dealing with the educable mentally retarded when it is made early. Sarason makes these pertinent observations concerning the diagnostic process:

(1) Far too many lay and professional people still conceive of the diagnostic procedure as one primarily involving the use of psychological tests, a conception which overlooks the crucial importance of determining the role of developmental factors, the current life situation of the individual, and the relation of these to the prediction of future level and quality of functioning.
(2) It is obvious that the diagnosis of mental deficiency is a serious matter in that it has far-reaching implications for the individual and his family.
(3) The diagnosis either of mental deficiency or mental retardation cannot be made by one professional specialist but by the teamwork of several. The psychologist, physician, social worker, and psychiatrist each have special skills which are necessary for obtaining the kinds of data on the basis of which a diagnosis can be made.
(4) A diagnosis is communicated to parents whose lives have been, are, and will be affected by the fact that they have a defective or retarded child. Since in every case... the parents have played an important role in the child's development, just as the child has been an important factor in their lives, the communication of the diagnosis cannot be perfunctorily handled. (32:15-16)

<u>A Graphic Analysis of the Range of Abilities in a Group of Educable Mentally Retarded Children</u> - As a means to a better understanding of the relative strengths and weaknesses of the educable mentally retarded, a profile borrowed from Kirk is useful:

PROFILE SHOWING RANGE OF ABILITIES IN A GROUP OF EDUCABLE MENTALLY RETARDED CHILDREN (20:108)



Kirk explains the profile in this manner:

> To more adequately represent the educable mentally retarded child the profile should be a band rather than a line. Using such a band (the profile on page 20) shows the range of development in each area for children usually labeled educable. On each characteristic most of these children will fall somewhere within the shaded area. They range in IQ from 50 to 55 up to 75 or 80. An educable mentally retarded child of 12 will therefore have a mental age between 6 and 9 years, as indicated by the shaded area.
>
> It should be noted that in height, weight, and motor coordination some of the retarded children are higher than average children but the majority of them are average or below. In other words, for physical characteristics there is an overlap between the educable mentally retarded and the average child.
>
> On mental age there is no overlap since all, by definition, are below average. On social maturity there is a wider discrepancy. Some educable mentally retarded children are near average in social maturity, but the large majority are below average. On speech and language development and reading and other academic subjects there is no overlap; the educable mentally retarded child is definitely below average. On other characteristics the overlap is considerable, for although on the whole there are more defects in ability to see and hear and in mobility among the educable mentally retarded than among the average, many of the former are quite normal in these respects. Similarly there is an overlap in interpersonal relations; some of the educable mentally retarded are near average but the majority are below average. (20:108-109)

What Are The Aims of Education For The Educable Mentally Retarded?

Once the educable mentally retarded have been identified, it becomes necessary to answer the question, "What are the aims and objectives of education for the educable mentally retarded?" Every teacher of mentally retarded children should decide what the goals are for these children. The literature concerned with education is full of philosophies, goals, aims, and objectives which seem trite, but are worth examining. Some are broad and general, while others, like Stevens', are more specific. Regardless of the nature of the aims, a sense of direction and purpose for the teacher is a must.

Two general aims are revealed by Kirk and by Butcher. Kirk states that "the ultimate purpose of educating mentally retarded children is

to help them adjust to the community at the adult level as social participants." (20:113) Butcher places emphasis on meeting needs when he says mental retardates display the same "fundamental social and emotional needs as all people. They can build healthy personalities only when these needs are recognized and satisfied." (10:19-21)

In the area of meeting needs, Stratemeyer, Forkner, McKim, and Passow view the objectives of the curriculum for exceptional children in terms of meeting the persistent life situations of these children. Concerning this idea, they state:

> Regardless of the talent or the handicap, an exceptional individual still faces persistent life situations. He must meet health needs, manage his money, prepare himself to earn a living, communicate with others, use various modes of transportation, make wise purchases, vote and take his part in other community enterprises, get along with others. If it is desirable for the typical learner to be helped to develop the knowledge and skills to meet such problems as they recur in increasingly complicated situations, it is equally desirable for the atypical learner to do so.(37:448)

Stratemeyer, Forkner, McKim, and Passow proceed by citing twelve persistent life situations developed by a curriculum committee of the Cincinnati Public Schools. The persistent life situations were:

1. Learning to keep healthy.
2. Learning to live safely.
3. Learning to understand one's self and to get along with others.
4. Learning to communicate ideas.
5. Learning wise use of leisure time.
6. Learning to travel and move about.
7. Learning to earn a living.
8. Learning homemaking.
9. Learning to appreciate, create, and enjoy beauty.
10. Learning to handle and adjust to one's social, technological, and physical environment.
11. Learning to manage one's money.
12. Learning to be a responsible citizen. (37:450-451)

This attack on the problem of curriculum development for the educable mentally retarded reflects the philosophy of meeting needs

as a primary goal of education. There are three other methods of curriculum development reflecting divergent views as to the objectives of education for retarded children. The separate subjects design is the traditional approach which usually involves "watering down" the regular curriculum. The "subject fields" approach utilizes the clumping of related fields of subject matter, and the "broad areas" approach centers on areas of living but not necessarily on problem areas. Many authorities in the field see the "needs" or "problems" approach as superior for retarded children.

Possibly the most usable set of goals for a teacher to consider is set down by Stevens, who states the goals for the mentally retarded "in terms of what the learner needs rather than in terms of what the teacher should teach..." These goals are worth considering:

1. Learning to maintain a state of physical well-being.
2. Learning to live safely.
3. Learning to understand oneself.
4. Learning to get along with others.
5. Learning to communicate ideas.
6. Learning to use leisure time.
7. Learning to travel and move about.
8. Learning to earn a living.
9. Learning to be a homemaker.
10. Learning to enjoy life through the appreciation of art, dance, and music.
11. Learning to adjust to the forces of nature.
12. Learning to manage one's money. (36:17)

Summary - In summing up the characteristics which lead to identification and diagnosis of the educable mentally retarded, six generalizations can be made:

(1) Early detection of the educable mentally retarded is difficult. Detection usually occurs during the early years of school.

(2) The educable mentally retarded generally do not have physical

characteristics which set them apart from other children.

(3) The individual IQ test is probably the most reliable tool for determining the nature of the retardation. Observation can often be helpful in determining the nature of the retardation.

(4) The educable mentally retarded learn in about the same ways as do other children of the same mental age.

(5) Certain psycho-educational problems do exist with these children. Some of these problems are poor retention, lack of ability to handle abstract materials, a short attention span, and a lack of imagination. Even with these problems, it has been demonstrated that educable mentally retarded children can profit from the programs of the public schools under the right circumstances.

(6) There are wide variations within a single characteristic of the educable mentally retarded. Combinations of these characteristics yield individuals who are mentally retarded, yet widely different from each other.

In concluding the aims of education for the mentally retarded, it might be said that the general opinion at the present time is that the objectives should be consistent with the persistent life needs of the individual. There are several lists of these persistent life needs in the literature, but most of the lists are centered on the persistant emotional and social problems which the retarded child shall encounter throughout life.

III. IN WHAT GENERAL AREAS CAN THE REGULAR CLASSROOM TEACHER HELP THE EDUCABLE MENTALLY RETARDED?

There are many techniques and procedures which can be utilized by the classroom teacher in helping the educable mentally retarded. It should be noted that in many instances these procedures and techniques are merely stop-gap measures to help the educable mentally retarded and, in some cases, the slow learners. Where trained professionals are available to assist retarded children, they should be given the opportunity to do so. It is under the care and guidance of these trained people that the educable mentally retarded have the best chance for making progress. However, it should be recognized that full professional care for every retarded child is a status that is yet in the future. Until that state is reached, much of the responsibility for helping the educable mentally retarded shall begong to the regular classroom teacher.

Teacher Attitudes and the Educable Mentally Retarded - High in importance among the things that need to be accomplished is the development of particular attitudes by the teacher. Three of the more critical attitudes to be developed are: cooperation with the parents of the educable mentally retarded, resistance to pressures which would harm the program for the educable mentally retarded, and acceptance of the educable mentally retarded child in all aspects of his personality, rather than in terms of intellect alone.

The development of an attitude of cooperation with every person who comes into contact with the educable mentally retarded child is important for the regular classroom teacher. Helping retarded children is not a one-person or even a one-agency undertaking. For maximum progress, all of the efforts of all persons involved need to be brought

to bear. It is essential that an attitude is developed which will allow maximum growth and development of the retarded child.

A cooperative attitude is especially important in developing communication between the school and the home of the retarded child. The classroom teacher plays a vital role in this communications link. Only the teacher understands completely the educational strengths and weaknesses of the educable mentally retarded child. The best method of forming a meaningful continuum between the school and the home is for cooperative attitudes to be developed by the teacher and the parents. (15:372)

A second attitude which is necessary for the teacher of the educable mentally retarded is resistance to inevitable pressures from within and without the classroom to alter the program for the retarded children. From without the classroom exists a dangerous assumption that the educational needs of the educable mentally retarded and slow learners differ in degree rather than kind. This assumption centers on the premise that "all they require is some special help, remediation, or a sufficient amount of pressure; to insure that they will apply themselves diligently." (15:25) But the slow learners and the educable mentally retarded are not remedial problems. Some of the slow learners may profit to a slight degree from remedial work, but generally speaking, the educable mentally retarded and the slow learners..."cannot 'catch up' or even 'keep up' by doing more homework or receiving additional instruction." (15:25) The basic content of school programs is written so that all the children of a specified age will comprehend and understand it with equal ease and to an equal degree. The educable mentally retarded cannot be squeezed into this type of conformity.

There is likely to be some degree of resistance from other children in the class. Fortunately, children are often more perceiving than adults; hence, with effort from the teacher, they will understand that the teacher is helping the retarded child just as they are being helped. It is especially imperative that the teacher in a classroom which contains an educable mentally retarded child help the children understand the principle of individual differences. If the normal children in the class understand that they too have strengths and weaknesses, they will be more likely to understand the teacher's activities with the retarded child even though the activities are different from their own.

The attitude of resistance to pressure should allow the teacher to think of what is "fair" for the individual rather than what is "fair" for the class. It should allow the teacher to break the shackles of tradition which lead to the belief that the retarded child was "getting off easy" if the retarded child's work was of a different nature from the work expected of the other children.

Developing attitudes which allow a teacher to get out of the rut of expecting the same progress from all of her students; to think of a child's progress in terms of "how far he has come"; and to prepare different lessons for one or two children in a class, requires exceptional self-discipline. The degree to which a classroom teacher can develop these attitudes, will determine the chances a retarded child has for maximum progress.

A third attitude which is desirable for the teacher of the mentally retarded is that of acceptance of the retarded child in every aspect of the child's growth. There is evidence that some teachers of mentally retarded children regard only the intellectual and social-

adjustment aspects of the maturation of these children. But mental retardation embraces all facets of the child's maturation, not just intellectual and social factors. Hutt and Gibby state in regard to all inclusiveness:

> The intellectual functioning of a child cannot be considered apart from his emotional and personality functioning. Each of these does not exist as a separate 'thing'...We must deal with the whole child in all of his complexity. (19:103)

An understanding attitude which encompasses all of the factors in a child's growth is a requisite for the child's progress. To deal with a child's intellect with no understanding of his emotions, to deal with his social growth with no understanding of his personality is to go bear hunting with a switch. To do the job, the teacher needs <u>all</u> of the understanding of the child that she can muster.

<u>General Approach to Teaching the Retarded</u> - The San Bernardino California Public Schools have compiled a unique set of general approaches to teaching the mentally retarded. (7) Some of these hints to effective teaching are applicable only to elementary children; some are applicable to all levels of maturity. As a group, they form a comprehensive set of suggestions which should become meaningful to every teacher of retarded children. Following are the approaches:

<u>BECAUSE THEY LACK INITIATIVE</u>

YOU:

... teach them to work under supervision.
... praise them for work well done and for persistence.
... try to develop elementary initiative.
... encourage them to work by themselves.
... make suggestions by planning with group.
... see that they are successful in other fields.
... do not expect them to think independently or be creative.
... should be clear and concise in your directions.

... play to their strengths and talents.
... allow copying or imitating in art.
... praise work done if even smallestppart is done to best of his

BECAUSE THEY LACK ORIGINALITY AND CREATIVENESS

YOU:

... play to their strengths and talents.
... allow copying or imitating in art.
... praise work done if even smallest part is done to best of his ability.
... draw from their own experiences.
... supply ideas, one at a time.
... show them in great detail, the best way of doing something, rather than depending on them to work it out.
... encourage them to put into frequent use any skill they have once mastered. After seeming to learn, they still forget.

BECAUSE THEY HAVE LIMITED POWERS OF SELF-DIRECTION

YOU:

... assist them to work by themselves.
... stress safety rules for satisfactory independence.
... guide them by suggestions and group planning.
... realize that physical placement of materials aids in self-direction.
... understand they require much direction from you, consequently, you assign school work within their abilities.
... establish routines in which one act becomes associated with another. (Example: Always have them wash their hands before going to lunch, or collect their materials when the warning bell rings. The connection of one act with another makes it easier for them to remember both and each success they have made makes them a little surer themselves. They get emotional satisfaction and desirable habits.)

BECAUSE THEY ARE OVER SENSITIVE

YOU:

... play to strengths and talents.
... familiarize associates with the problem and maintain a tolerant attitude in the classroom.
... never criticize or speak in an unkind manner.
... remember that all children have the same basic feelings but different responses.
... avoid SARCASM at all times.

BECAUSE THEY TEND TO BE SHY

YOU:

... praise even small accomplishments.
... give class recognition when possible.
... develop a friendship between teacher and child.
... stimulate environment.
... provide for group membership but do not force him to join.
... assign duties that will tend to have him work with others in a group.

BECAUSE THEY ARE VERY APT TO FEEL SORRY FOR THEMSELVES

YOU:

... must have patience, understanding and sympathy.
... provide activities that allow them to forget themselves.
... show complete acceptance.
... build up tolerance of others.

BECAUSE THEY NEED TO BE BROUGHT OUT

YOU:

... use finger paint, crayons, water colors, and other art materials to provide opportunities for easy expression. Through art materials they are able to put across ideas that are impossible for them through verbalization.
... tell stories and help them project themselves into a story situation.
... dramatize as much as possible to help them see experiences through other situations.
... use music by both listening and participating. A listening center provides a wonderful opportunity for individual selection of records and a means of developing good taste and enjoyment. Home-made instruments as well as commercial ones help in music participation.
... share hobbies, trips, and materials.

BECAUSE YOU KNOW many of the characteristics and interests of mentally retarded children, you can help them in the following ways:

BECAUSE OF THEIR SHORT ATTENTION SPAN

YOU:

... give work geared to their level of understanding.
... use concrete materials and experiences.
... try shifting activities.
... give only one direction at a time.
... change activities before they become fatigued.
... try to increase attention span through their conscious effort.

BECAUSE THEY HAVE POOR HEALTH HABITS

YOU:

... stress good habits through a program of cleanliness.
... praise improvement in appearance.
... have large mirror in classroom.
... use pictures, films, and group discussion.

BECAUSE THEY HAVE A VERY LOCAL POINT OF VIEW

YOU:

... connect all learning with world about them.
... emphasize social and civic aspects of home, school, community.
... begin with local point of view and seek to broaden it.
... stimulate interest within the group.
... avoid new associations and situations as much as possible until child expresses interest.

BECAUSE THEY TEND TO DEPEND ON OTHERS

YOU:

... adjust all phases of program to meet level of the child.
... emphasize individual successes.
... develop assurance in own ability. Praise his efforts.
... broaden independence.
... secure help and cooperation between children in class.

BECAUSE THEIR EXPERIENCES AND BACKGROUND ARE VERY LIMITED

YOU:

... broaden experience background with stories, field trips, pictures, discussions of material things.
... tie new experiences into the familiar.

BECAUSE THEIR PERSONALITY DEVELOPMENT AND SOCIAL ADJUSTMENT IS SO SLOW

YOU:

... develop wholesome leisure time activities.
... never rush or push child. Let them make adjustments at their leisure.
... secure help and understanding of entire group.
... give recognition as a necessary part of the group.

BECAUSE THEY ARE EASILY EXCITABLE

YOU:

... maintain a calm, relaxed atmosphere.
... keep a friendly, pleasant speaking voice.
... use unhurried, patient explanations and directions.
... keep teacher verbalism to a minimum.
... maintain simple routine.

BECAUSE THEY REQUIRE LONGER LEARNING PERIODS

YOU:

... never assume that a skill has been learned until the student uses it independently.
... plan a variety of experiences in which a skill or understanding recurs.
... remember that learning disabilities and mental retardation require intensive teaching on a long-range, slow-motion basis.

These children are slow mentally. However, there are other characteristics that are apparent in them. Physically and emotionally, they are also immature. Because you know this also about them, you can be their greatest help.

BECAUSE OF THEIR SLOW REACTION TIME

YOU:

... do not hurry.
... do not criticise or allow children to ridicule.
... develop activities as play to increase reaction time.
... be sure one thing is well learned before introducing any new thing so as not to confuse.
... introduce one thing at a time.

BECAUSE OF THEIR HIGH MORTALITY RATE AND LIABILITY TO PERSONAL ILLNESS

YOU:

... teach aafety rules.
... practice health rules.
... be alert for symptoms of illness.
... familiarize yourself with the educational implications of specific physical defects in your class.
... guide with a firm gentle approach and without expressing pity.

BECAUSE OF THEIR POOR COORDINATION

YOU:

... improve coordination in fields of major success first.
... use simple games and exercises.
... don't overrate ability.
... develop a great deal of free play.
... do not allow comparison or competition.

BECAUSE OF THEIR LACK OF FLEXIBILITY

YOU:

... stress aspects in which child is successful and which he enjoys.
... do not force changes.
... shift gradually to new aspects.
... set up and follow a definite routine to help develop feeling of security.

BECAUSE THEY HAVE A LIMITED VOCABULARY

YOU:

... strive for gradual growth through concrete applications.
... teach vocabulary, simple words, and try to increase their vocabulary gradually with words and examples.
... create many opportunities for verbal expression.
... use high frequency words again and again.
... utilize concrete situations to introduce new words.
... emphasize speech and speech correction.
... introduce new words slowly.

BECAUSE THEY LACK POWER TO REASON

YOU:

... use concrete experiences or examples.
... teach right from wrong, realizing that these students are easily led.
... guide him in developing ability to reach a decision.

BECAUSE THEY ARE NOT ABLE TO USE GOOD JUDGMENT

YOU:

... make parents cognizant of fact that these students are easily led.
... begin growth with judgments on simple things.
... supervise as much as possible.
... develop moral values.
... be specific and definite. Leave only decisions which are within their abilities to make.
... establish a simple pattern for judging cause and effort. For example: read part of a story; have them guess or supply an ending.
... list events in a story or trip and help them decide which is most important and why.

BECAUSE THEY ARE NOT ABLE TO EVALUATE

YOU:

... provide experiences that they can evaluate. Tell them what to look for, or point out to them things that are important.
... measure growth in small increments.
... evaluate often after short intervals.
... teach them to recognize their own qualities.
... provide many opportunities under guidance for students to evaluate work, materials, etc.

BECAUSE THEIR LANGUAGE ABILITY IS FREQUENTLY INADEQUATE

YOU:

... provide as many opportunities as possible for language development activities. There are so many experiences which provide excellent material for "time to talk."
... set an example, using simple correct speech which the students may imitate.

BECAUSE THEY FOLLOW DIRECTIONS POORLY

YOU:

... make sure directions are simple and geared to their level of understanding.
... give one direction at a time and supervise execution.
... help him read printed directions.
... talk directions over with him; make sure he knows what you expect.
... give personal attention.
... set example, if need be.
... give directions simply in two-step sequence. Increase the number as the child gains a retentive memory.
... always give directions in logical order.
... allow the child to fulfill the first direction before giving the second.
... make lists or directional chart and encourage students to check back and see what comes next.

BECAUSE OF THEIR SHORT MEMORY AND RETENTION SPAN

YOU:

... will be required to use more patience than with a normal child to teach good habits or anything else. Before a habit is formed you will have to repeat direction over and over and over again, but do not nag.
... must keep the tone of your voice as calm and even as possible.
... should try different ways of giving directions.
... give short assignments.
... make sure to provide opportunities for success.
... read or tell brief stories. Have child repeat as much as he can remember.
... work for sequence of events.
... keep the same physical placement of materials.
... realize that experiences, kinesthetic, A/V aids and social drama are techniques relatively successful.
... use many motivated practice periods.
... review frequently over longer period of time.

IV. WHAT ARE THE TECHNIQUES FOR TEACHING RETARDED CHILDREN?

There are certain techniques and skills of teachers which seem to be especially useful in teaching retarded children. A study conducted by the U. S. Office of Education points to some of the more important competencies in working with the educable mentally retarded. The title of the study is "Qualifications and Preparation of Teachers of Exceptional Children." In the study, one hundred fifty superior teachers of retarded children were the source of the data. The study revealed that the teacher of the educable mentally retarded needs to give high priority to recognizing the child as an individual; to develop great understanding of the social and emotional needs of retarded children; and to develop an attitude which combines objectivity with sympathetic understanding of the child's problems. Other skills deemed important as a result of the study were skills in individualizing the curriculum, skills in counseling the child and his parents, skills in preparing the children for community life, and skills in keeping experiences practical and immediate. (41:37-38)

GENERAL TECHNIQUES FOR TEACHING THE MENTALLY RETARDED

The U. S. Office of Education follows up the study with some general techniques and teaching goals:

a. Procedures used with the educable mentally retarded should be based on the total maturity level of each individual in the group. There is a wider diversity of developmental levels (chronological, mental, physiological, emotional, social) among one class of the educable mentally retarded than with an ordinary class of children.
b. The quality of instructional methods is as important as the quantity of materials presented to the educable mentally retarded. The educable mentally retarded develop concepts and generalizations more slowly than do normal children; therefore the teacher should utilize concrete materials and simple, direct methods of presentation. Likewise, the teacher should have the skill to recognize

cues and possibilities for the development of generalizations.

c. Verbal symbols are efficient teaching tools in the early stages of learning for the educable mentally retarded. Encouraging young educable mentally retarded children to verbalize their experiences is an especially rewarding technique. Avoiding abstract written symbols,such as words and numbers, is often wise early in the educational process. Directions from the teacher are most successful when there is no requirement of a high degree of reading and interpreting skills.

d. Allowing adequate time for each phase of the learning process is important. The educable mentally retarded develop concepts slowly; therefore a logical sequential order of learning experiences evolved over a long period of time is recommended. The educable mentally retarded child has poor retentive ability; hence the need for meaningful repetitive experiences.

e. A variety of approaches is usually more successful in teaching the educable mentally retarded than reliance upon a single technique. In all approaches, a simple vocabulary for the teacher is a must. The teacher must be able to devise varied means of presenting materials. With each change, a repetition of understandable, oral directions is recommended.

f. The educable mentally retarded respond quite well to experiences which allow them to explore and learn as a result of the exploration. No matter how simple the exploration process may seem, the teacher should be ready to construct experiences which will allow the educable mentally retarded to learn through searching.

g. The use of audio-visual aids is especially effective in helping the educable mentally retarded develop generalizations.

h. The educable mentally retarded are confused by the introduction of too many requirements at the same time. Success is gained more readily by the introduction of only a few rules. This is especially true if the children have had a part in formulating the rules.

i. The educable mentally retarded are frequently prone to mental health hazards. Failure, rejection, overprotection from parents, and insecurity are potentially severe hazards to the educable mentally retarded. By developing means for these children to succeed, by accepting them as individuals, and providing security for them, the classroom teacher can make a real contribution to their growth and development. (41:9-14)

TECHNIQUES FOR TEACHING RETARDED CHILDREN IN SPECIFIC AREAS

Elementary Arithmetic - In the primary grades, an important factor

in teaching retarded children is readiness. This factor is important for all children, but it is especially vital in the case of retarded children. Marion Walsh Botta has suggested some useful techniques and approaches for teaching reading, numbers, and writing to retarded and slow children. She suggests that after definitely determining that the child is ready to read, the teacher begin with the child's name, safety signs, color words, and words related to pictures. She proceeds by stating:

> We compare words for the same beginning consonants and look for sameness or difference in ending consonants. Then we look 'in between'.
>
> After a child learns to look at and connect number group with number symbol, we see if he is ready to learn number words. The next step is beginning to write letters of the alphabet and numbers from 1 to 5, then 1 to 10, and then 1 to 12 (for time-telling). (8:110)

When the teacher is reasonably certain that the retarded children know numbers and can count out number groups with blocks and tongue blades, testing should commence. Botta continues:

> The children are given a box or bundle of counters. Teacher puts up any number from 1 to 12 on the pocket chart. The children quietly count out the right number of counters. The teacher checks and makes notes on 'whom to redrill on what'.
>
> This testing leads into graphic simple arithmetic. A number sentence is put on the chalkboard (1 + 2 =). The children use their counters to represent the numbers and the answer. When they have learned to write numbers, the activity is reversed. That is, the teacher puts up groups of objects and the children write the numbers.
>
> In testing for retention of color words, the teacher puts up one color word at a time. Each child makes a mark on paper using the appropriate crayon.
>
> Learning to write may present a whole new set of problems. A child may have difficulty 'seeing' a letter as a whole. He can be helped by having him draw lines from dot to dot (at desk and chalkboard); or use cardboard templates of a circle, square, triangle, and of letters. He may need to 'get the feel' of letters and to construct a word from wooden letters before he can write it. Time, practice, encouragement, and patience will conquer seemingly impossible problems.

> Sandpaper glued on wooden letters to be traced with the finger is helpful. Talking to oneself quietly while writing a letter or number can be the answer for some children. For example, 'I start up here and come straight down. Then I cross it up at the top.'
>
> In the beginning we use plain, unlined paper to make our letters and numbers, in order to avoid the confusion of more lines. Later, as the child becomes more organized, we introduce the lined paper. (8:110)

Elementary Language Arts - The language arts program for retarded children should include many activities that allow the children to handle and do things. "Instruction in the literary branches should be correlated or integrated with manipulative activities such as drawing, sketching and making things." (24:4) Mattson suggests five activities involving action which will help develop language skills in the educable mentally retarded:

1. Read and tell stories to them
2. Show pictures. Have the children talk about them
3. Use simple dramatizations
4. Use toy telephone conversations
5. Use choral work and rhymes (24:13)

Mattson isolates a danger inherent in teaching reading to retarded children at the first grade level. The danger is starting educable mentally retarded children to read too early. Mattson recommends that the following eight requirements be met before instruction in reading begins:

1. A mental age of six years
2. Adequate language development
3. Memory for sentences (very short sentences)
4. Visual discrimination
5. Auditory discrimination
6. Correct enunciation and pronunciation
7. Motor control
8. Motivation (24:13)

Mattson suggests that phonics be carefully presented. Phonics rules should be avoided early in reading activities. There is a real

danger also in introducing silent reading to the educable mentally retarded too early.

Specialized Materials - Until recently, materials had to be adjusted to the needs of the educable mentally retarded and the slow learners. This adjustment was by necessity the responsibility of the classroom teacher. Today, the classroom teacher is getting some help in providing appropriate materials for retarded children. Some publishers are helping meet this need by making available books with high interest and low-level vocabulary and sentence structure. A list of such materials can be obtained for one dollar. The list is called "High Interest-Low Vocabulary Reading Materials, A Selective Book List," and is available from The Journal of Education, 765 Commonwealth Avenue, Boston, Massachusetts, 02215. (40:101-104)

As in the development of language skills, the manipulation of objects by the retarded children is important in developing number skills and concepts. Simple games involving the use of dice, and simple money games, are especially useful for retarded children.

Elementary Health Education - It has been observed that some mentally retarded children come from homes where health standards are less than desirable. The mentally retarded child is less capable than a normal child in being able to cope with poor health; therefore, the responsibility of the teacher is increased. The responsbility does not include becoming a diagnostician, but the teacher is in a position to observe chronic health conditions which may require attention. Slaughter suggests to the teacher that

> The always tired and listless child, who seems to be growing too slowly, suggests a possibility of malnutrition or the need for a tuberculin test of chest X-ray. The child who gets out of breath easily and whose lips sometimes get

> blue may have a cardiac condition. Nervous conditions, hand tremors, twitchings of the head, face, or arm muscles, and dizzy spells are all symptoms indicating need for a medical checkup. (34:59)

Close attention to health conditions in the classroom may have a transfer effect on retarded children. If a retarded child is given the responsibility of periodically checking the room temperature, the proper lighting for a room, and other health conditions in the classroom, he is more likely to carry over these responsibilities into his personal life.

A daily health check by the teacher is an efficient method for students to acquire habits of cleanliness and health. The health check may be an informal inspection, or a more formal one. A criterion for success in daily checks is that embarrassment or resentment not be a result. Suggestions and gentle pressure to keep oneself, the things one uses, and one's environment clean are more successful than stern demands. Providing facilities for washing hands and for cleaning equipment is especially useful as a tool for teaching habits of cleanliness.

The physical training of the educable mentally retarded is an important part of their school experience. Many retardates are below average in muscular control and coordination; thus attention to their physical education needs is vital. Special attention needs to be given to helping these children overcome habits of poor posture and awkward movements. If the educable mentally retarded child can take part in physical education activities along with normal children, it is encouraged. Participation, however, should be contingent upon the educable mentally retarded child's ability to do so without

embarrassment.

For younger retarded children, the following physical education activities are especially useful:

1. Walking stunts: Walking straight or circular lines; draw chalk lines on the floor.
   Stepping over objects.
   Walking around objects placed as obstacles without hitting them.
   Starting with right foot; starting with left foot.
   Going up and down stairs properly.
   Marching.
   Walking on rounds and sides of ladder placed flat on the ground.
   Series of boxes; stepping from box to floor and floor to box without looking at feet.
2. Jumping: jumping lines;
   Jumping rope.
   Hopping from point to point on both feet without losing balance.
   Hopping on one foot from point to point.
   Hopping on one foot and keeping on a chalked line.
   Hopping with arms folded.
   Hopping with arms back of head.
   Hopping to avoid ball rolled and aimed at feet.
3. Stunts with balancing board: Walking across, using cane to assist.
   Walking across using balancing pole.
   Walking across with arms folded.
   Walking across with object on head.
   Walking across with fewest steps possible.
   Wheeling a toy wheelbarrow across.
   Carrying a tray with a tower of blocks on it.
4. Slapping: Try to hit the extended hands of another person with a piece of cardboard before the person can withdraw his hands.
   Bean porridge hot. (In the beginning use only the motion accompanying the first three words of the verse.)
5. Picking up: Using buttons, blocks, seeds, pieces of paper, etc., see how many objects can be picked up in one minute, and so forth.
6. Wringing: Race with time or another person to see how many Mason jar tops can be removed.
   Twirl button molds on a string.
   Spin tops.
   Spin pie plates.
7. Throwing: Bean bags in a box or basket.
   Target games.
   Ringing a stake. To begin with, it is suggested that ring be of as large a size as can be conveniently handled.

Playing catch.

8. Pushing and pulling: Push and pull toys: balancing ball, wheelbarrow, kiddie car, carts, toy trains and wagons, rocking horse, hoops, pushmobile.
9. Stunts involving carrying objects in hand: Carrying an object in one hand (anything from a book to a container filled with water) while the other hand is: holding another's hand, moving a chair.
10. Manipulation of hand muscles: Bead stringing.
    Putting pegs in boards.
    Drawing and painting.
    Cutting out pictures.
    Using clay, sand, and plastic materials.
    Tearing carpet rags.
    Buttoning clothes.
    Lacing shoes.
    Braiding.
    Using hand punch. (34:67-68)

Teaching the educable mentally retarded in the secondary school involves basically the same principles as those for the elementary level. Readiness and motivation are still important factors even at the senior high school level. One of the more common dangers inherent in teaching the educable mentally retarded and slow learners on the secondary level is attempting to fit these young people into a series of activities which were designed for children of greater intellectual capabilities. It is once again the old story of coercing students to conform to a curriculum guide or course outline rather than developing activities to fit the needs of the students. If this is good practice for students closer to the norm, it is even more beneficial for the educable mentally retarded children.

Secondary Language Arts - In the language arts area on the secondary level, care must be taken to insure that interest is not dulled through the use of reading materials that are meaningless for the retarded and slow learning students. Ethel Tincher recently examined a curriculum guide for slow learners on the secondary level.

Included in the readings were Beowulf, Canterbury Tales, Macbeth, and Silas Marner. The technique to be used in teaching the literature was for the teacher to paraphrase the stories for the students before the stories were read orally. (43:290)

This technique of teaching and the selections themselves are not likely to produce success with slow learners or the mentally retarded. These youngsters tend to have a poor attention span. Following something as lengthy and involved as Beowulf or Macbeth is likely to be almost impossible for them. Many educable mentally retarded children and slow learners come from practically non-verbal households. The adults in these homes speak in short sentences and phrases - "Get this," "Bring that." Lengthy directions or explanations are incomprehensible to the children from such homes.

Dr. Carl Byerly of the Detroit Public Schools suggests that directions for studies of Beowulf or Macbeth would be difficult enough, but that the selections themselves could not be followed or understood by the educable mentally retarded. He states: "We cannot reach these particular students by beginning with classics, not even the watered down variety. We must start them where they are, not at some arbitrary point in a departmental guide." (43:292)

Communication with retarded children is difficult on any level or any subject area, but it is especially tedious in the area of language arts. A reason for this situation could be attributed to the fact that language arts teachers must accept a great share of the responsibility for reaching the slow learners and the educable mentally retarded. Communication is the forte of language arts teachers; thus, justified or not, the importance of their work with the educable

mentally retarded is magnified.

The science of sociology reports that 95% of today's teachers come from the middle class of American society; whereas 65% of public school students have their origin in the lower class. Thus the problem becomes doubly difficult for the teacher of English who is really concerned with communication. He must find ways of determining levels of communicative skills on a horizontal level and a level of social concommitance which will allow him to communicate. In developing communications links with these children, much attention should be given to providing time each day for educable mentally retarded children to participate in communicative skills. One technique for compensating for their short attention span is to divide the class period for these children into segments whereby each student has a chance to read, write, listen, and speak.

Tincher suggests that reading materials in the junior high school should range from second to fifth grade level. Reading materials in the senior high school should range from second to eighth grade level. The books and stories should be relatively brief. Tincher proceeds by revealing some of the more desirable characteristics of literature for educable mentally retarded children in the secondary school:

1. The characters should be adolescents or adults, not young children. The setting should be similar to that with which the child is familiar.
2. Time should most usually be the present, although space stories may be set in the future and westerns in the nineteenth century.
3. Characters should sometimes live in multiple dwellings, tenements, housing projects, and run-down one-family houses; sometime, but less frequently they should live in homes representing high-income levels.

4. The socio-economic status of the main characters should usually be lower-lower and upper-lower, in contrast to the middle and upper class usually found in literature.
5. Home life of low socio-economic groups should often be depicted as wholesome, although not because of deprivation.
6. Teachers should use some 'success' stories of characters who have risen socially, economically or culturally.
7. Adults in stories should most usually be blue collar workers portrayed with admiration; they should sometimes be unskilled or semi-skilled portrayed without condescension; they should sometimes be high-level workers and business and professional men.
8. Minority group members should occupy a variety of economic and vocational levels, including the highest.
9. At every vocational level, people should be portrayed as feeling pride of workmanship and as accepting the dignity of labor of all types.
10. There should be honest facing of current civil rights problems.
11. Stories should sometimes show effects of automation on adults in such ways as job loss or fear of job loss.
12. Plots should sometimes revolve around problems resulting from change. There are problems such as change of housing because of urban renewal, slum clearance, or freeway displacement.
13. The content of most materials used by the teacher of slow learners should have strong immediate appeal for teen-agers. There are themes of adventure, danger, survival, athletics, jobs, cars, science fiction, military service, dating, school activities, mystery-detective stories which have interest for teens. Also appealing are themes dealing with the need to belong to a group, the need to be accepted by peers, the need to succeed at something, the need to feel the individual is important, the need to feel satisfied about the status of parents. Whatever the theme, overt moralizing is to be avoided. (43:5-7)

Secondary Mathematics - Paul C. Burns, a noted math teacher, reveals some of the factors that should be included in a math program for retarded children on the secondary level. Much of what he related parallels findings from other areas. Readiness is an important factor in language arts; it is also an important factor in the teaching of mathematics. Other factors which need to be included in a math program if it is to be effective are use of concrete materials, a variety of activities, use of grouped and indicidualized instruction, an orderly

system of presentation, use of oral and incidental mathematics, meaning and understanding of numbers as contrasted with mere mechanical manipulation of numbers; use of computational skills in meaningful life-like situations, and considerable repetition. (9:175-176)

For the junior high school math program for the educable mentally retarded, Burns suggests that the following concepts and skills be included:

1. Understanding of place values
2. Facility in addition with regrouping
3. Facility in subtraction with regrouping
4. Facility in multiplication (possibly as high as 2-3 digit multipliers)
5. Facility in division (possibly as high as 2-3 digit divisors)
6. Common fractions (addition and subtraction possibly multiplication of a whole number times a fraction, as $3 \times \frac{1}{2}$)
7. Estimation
8. Measurement (tape measure, carpenter's ruler, speedometer)
9. Problems (oral arithmetic; 'irrelevant fact' problems; original problems)
10. Terms and symbols (appropriate to operations) (9:176)

For the senior high school math program for the educable mentally retarded, Burns proposes that the following skills and competencies be considered:

1. Items listed under the program for the junior high school level
2. Common fractions (multiplication and division)
3. Decimal fractions (all four operations)
4. Percentage
5. Estimation
6. Measurement (mileage on a map, liquid measure, content of food containers)
7. Informal geometry (perimeter, area, angle)
8. Simple business procedures, as cost; expense, receipts, overhead, mortgages; dividends; money invested; promisory notes; rent; health, car, and life insurance; taxes - federal, state, property, and sales; home budgets; wise buying - misleading advertisements, quantity buying, installment buying; postal practices - money order, parcel post, special delivery.
9. Simple banking procedures (checks, saving accounts, receipts, money orders)

10. Occupational problems (hours, wages, rate of pay, social security, withholding tax, union dues, income tax)
11. Numbers in shop and home economics problems. (9:176-177)

Secondary Industrial Arts - Industrial arts is an area that possesses many possibilities for helping the growth and development of retarded children. The help rendered comes in personal and emotional adjustment, social adjustment, and economic adjustment. (33:23)

In industrial arts, retarded children can be provided experiences which tend to lower the frustration resulting from their attempts to compete with children of greater ability. Retarded children do have low frustration tolerance. A project in industrial arts can give the retarded child the opportunity of competing only with his past performance. In this way, the frustration which results when the child feels himself slipping behind the group is eliminated.

Industrial arts mass projects offer an opportunity for retarded children to make important social adjustments. Projects in which a number of students are working together toward a desired goal give the retarded child a chance to work with others and under the direction of others.

Industrial arts classes which are properly planned often lead retarded students into productive places in the labor force. Even though the majority of mentally retarded children can qualify only for unskilled or semi-skilled occupations, industrial arts classes can develop these skills plus attitudes and habits of safety for himself and his fellow workers (33:23)

Laurence J. Peter summarizes some of the advantages of industrial arts programs for the mentally retarded when he states:

> Practical and vocational education is more than 'making things' or 'learning a trade.' As well as learning the particular skills required for a job, vocational training should include teaching the child how to relate to his co-workers and his supervisors. He should learn punctuality and the other responsibilities expected of a worker. The methods of teaching these behaviors should be an integral part of teaching the technical and manual aspects. Learning of proper attitudes and ways of behaving are functions of the whole personality of the child, and vocational training should be one way in which the child is helped to achieve social maturity (29:122)

The Phoenix, Arizona schools have utilized industrial arts as a useful tool in meeting the needs of retarded children. They have found that woodworking is a successful means of promoting good habits in the educable mentally retarded. The Phoenix schools have examined carefully their program from primary through upper secondary levels. Examination of the total program has revealed that this type of activity promotes good habits in the educable mentally retarded. Safety habits, the habits of tending to one's own business, and the habits of controlled emotions are all developed as a result of industrial arts programs.

Woodworking activities have been especially helpful for retarded children. Retarded children, like all children, love to use a saw and a hammer. If the projects undertaken are designed to fit the age and interest of the children, their affinity for tools can be used as a motivating force for learning.

Most children must be taught how to hold a hammer and strike a nail. An effective drill for learning this activity is to use a simple outline design of an animal or the child's initials, made with nails. A piece of two inch pine or redwood works well for this exercise.

Older retarded children, ten years and upward, can be taught how to handle a coping saw so that the blade will not break, how to properly place wood in a vice so that a saw can be used, and how to cut shapes with the saw. At about 12 years, many retarded children can be taught to properly and safely use a powered jigsaw and drill.

If time and effort are expended wisely by elementary teachers on woodworking projects, the retarded children will have a much better chance of completing even more elaborate and complex projects at the secondary level. Such a program has led some retarded individuals into useful jobs as carpenters' helpers. At any rate the children have learned to use a hammer, nails, and a saw. These skills are always useful around the home.

In teaching manual skills like woodworking to retarded children, one of the chief obstacles to overcome is the tendency of these children to tire of a project before it is satisfactorily finished. Often the retarded see no point in wasting time sanding and carefully finishing a project. They see the project cut out, and apparently are over-eager to see it in use before it is properly finished.

Woodworking and other manual arts can be tied into units studied in reading and other study areas. A truck built by a retarded child can be related to a unit on transportation; a wall plaque of an apple or pear can be related to a food unit.

On-The-Job Training - In helping retarded youth gain practical experience and learn job skills, cooperative programs of on-the-job training have been very useful. A look at the various occupations in which retarded youth have taken part gives an indication as to the scope of this useful program. Following is a resumé of the assignments

for youth participating in the Cooperative Program of Special Education-Vocation Rehabilitation in Texas for the year 1962-63:

1. Hotel and restaurant operations (20.87% of total assignments)
   49 bus boys, 13 dishwashers, 7 cafeteria countermen, 5 soda fountain clerks, 4 bus girls, 4 fry cooks, 3 general help, 2 school cafeteria helpers, 2 waiters, 1 salad maker, and 1 dietary aid.
2. Retail Trade Occupations (16.29% of total assignments)
   41 grocery stockers and sackers, 11 florists' helpers, 5 drug store helpers, 4 hobby shop helpers, 2 auto parts helpers, 2 drapery shop helpers, 1 battery store helper, 1 bait and tackle shop helper, 1 clothing store helper, 1 furniture and appliance store helper, 1 gift wrapper, and 1 meat cutter apprentice.
3. Auto Service Occupations (12.62% of total assignments)
   26 service station attendant helpers, 16 mechanic's helpers, 4 auto body repair helpers, 3 tire capping helpers, 1 generator and starter repairman helper, 1 radiator repair helper, 1 used car lot attendant, 1 parking lot attendant, 1 car washer, and 1 wrecking yard helper.
4. Personal Service Occupations (9.4% of total assignments)
   22 beauty operator trainees, 8 barber trainees, 5 beauty shop assistants, 4 shoe repair helpers, and 2 bootblacks.
5. Domestic Service Occupations (7.11% of total assignments)
   17 janitors, 12 maid-generals, 1 gardener's helper, 1 porter.
6. Medical Service Occupations (4.82% of total assignments)
   16 hospital - general help, 2 practical nurses, and 3 veterinarian hospital assistants.
7. Construction jobs (4.36% of total assignments)
   3 painter's assistants, 3 carpenter's helpers, 3 general helpers, 3 plumber's helpers, 3 electric company helpers, 2 brick and tile helpers, 1 floor layer apprentice, and 1 tile setter's helper.
8. Furniture Occupations (2.98% of total assignments)
   4 furniture refinishing apprentices, 6 upholsterer's helpers, and 3 factory laborers.
9. Agriculture and Horticulture (2.52% of total assignments)
   6 farm hands - general, 1 school ground maintenance helper, 1 landscape nursery trainee, 1 farm hand - poultry, 1 agricultural aide - rice experiment station, and 1 tree pruner.
10. Cleaning Plant Occupations (2.29% of total assignments)
    5 cleaning and pressing helpers, and 5 laundry helpers - general.
11. Miscellaneous Occupations (16.74% of total assignments)
    11 moccasin lacers, 7 unskilled laborers, 7 routemen's helpers, 6 day nursery assistants, 3 fence erectors,

> 3 frozen food packers, 2 baker's helpers, 2 checkers, 2 washateria maintenance helpers, 2 foundry laborers, 2 typists, 2 department store stock clerks, 2 bowling alley boys, 2 bow makers, and one each of textile mill laborers, mattress factory helpers, welder's helpers, electric motor cleaners, radio repairman's helpers, refrigerator mechanic's helpers, hand sewers, millman's apprentice, warehousemen, candy factory helpers, lumber stackers, bottling plant laborers, picnic supply packers, paper shredders, dressmakers, pocket turners, armature winder's helpers, leather goods helpers, shipping clerks, and golf course maintenance helpers. (38:84-85)

This summary is included for two reasons: (1) to help teachers realize the opportunities available for helping retarded children develop into useful, productive citizens, and (2) to help teachers perceive their responsibility in helping retarded children gain the skills and attitudes which will help them become happy, participating, independent citizens.

All-Level-Art - At all levels, developing imagination in the educable mentally retarded is a difficult task. Alfred Fredette has found that art can be helpful in revealing imagination. He has found that nature walks are valuable in providing first-hand experience in observing patterns, textures, structure, and design. Children are eager to make comparisons once the ability to make comparisons is developed, and often surprising results occur. Fredette observes: "This initial experience in the basic elements of design can lead to countless new challenges in the realm of creative and observational expression." (14:22)

Grouping Retarded Children - The grouping of the educable mentally retarded appears to have disadvantages as well as advantages for the children. Sparks and Blackman, in a survey of studies, concluded

that social skills and personal adjustment were developed better when retarded children were grouped together. (35:243)

There can be little doubt that no matter what the nature of the class may be, the personality and skills of the teacher are vitally important as factors in the progress of the children. Cruickshank, in commenting on the importance of the teacher, says there can be little doubt that the influence of the type of instruction offered and the personality of the instructor are of importance in teaching the mentally retarded. He proceeds by stating:

> Numerous comparative studies, such as those reported by Bennett, Pertech, and Johnson, further indicate the probable influence of instruction. These studies compared the achievement of mentally retarded children in special classes with the achievement of like children in regular classes. They showed that those mentally retarded children who remained in the regular grades were achieving higher than those who had been placed in special classes. Since in Johnson's study the factor of selection for placement in the special classes was controlled, the differences had to be caused by instruction or emphasis of academic instruction in the respective curricula. (11:462)

An important study by Mattson revealed the possibility that enthusiasm, acceptance of the mentally retarded as people, self direction, initiative and adaptability were the factors which separated effective teachers of the mentally retarded from less effective teachers. If instruction is as important as research seems to indicate, the teacher qualities identified by Mattson should be considered in the staffing process. (25:52)

Abraham points to some dangers inherent in teaching retarded children in the regular classroom. His reference has special import for teachers of slow learners. He states:

The teacher may be limited in his efforts because of

> class size, a shortage of specialized help, and a failure of his own background to include the specifics of 'individual differences.' In addition, a problem related to slow learning may be magnified if the teacher expects average work from below-average children, retains average standards, or uses the techniques of fear and punishment to create abilities that may be nonexistent. A vicious circle may evolve: the child is low and becomes lower because of the unrealistic pressures involved, and the lowering and pressuring continue. (1:74)

Placing children in special classes is a difficult task. The factors upon which such decisions are based need to be those which are taken into account when considering the total needs of the child. The social consequences of judgement errors in placement make all factors important. It is possible for a child in the upper ranges of the IQ level for retardates to be more successful in a special class. It is also possible for a child in the middle level for educable retardates to experience more success in regular classes. Thus, it is unwise to use IQ tests alone as a determiner in deciding upon placement of any child. A report of the Department of Health, Education, and Welfare states: "In all cases, each child must be considered on an individual basis, and other factors, in addition to his IQ, need to be taken into account." (41:6) It is often wise to allow a committee of informed, trained people to make placement decisions. In any case, placement in special classes should not be made without prior warning to parents. The children involved often have histories of failure in regular classes. The time for informing parents is when the child first has difficulty - not when the child is ready to be put into a special class.

Summary - There exist certain attitudes, techniques, and procedures which seem most helpful in dealing with the educable mentally

retarded in the classroom. The teacher of educable mentally retarded children needs to possess the attitudes of cooperation, resistance, and acceptance: cooperation with the home and all factors bearing upon the success of the child; resistance to pressures which advocate programs and techniques detrimental to the well-being of the child; and acceptance of the retarded child as an individual of worth.

There are certain techniques and procedures which are valuable in teaching retarded children at any level: (1) the mental maturity of the individual needs to be considered in the teaching-learning process, (2) the quality of materials used is as important as the quantity used, (3) verbalizing is important in communicating with retardates, (4) adequate time for each phase of the learning process needs to be provided, (5) a variety of approaches is superior in teaching the mentally retarded, (6) exploration by the student is especially valuable in teaching the mentally retarded, (7) audio-visual aids are especially useful in teaching retarded children, (8) only a few rules or directions should be introduced at one time, and (9) mental health hazards such as over-protection should be avoided.

In specific areas, there are vast numbers of techniques and procedures that are valuable. Probably the most important factor in specific areas at the elementary level is readiness. It is of vital importance that failure and rejection be avoided with mental retardates by making sure that they are ready for learning a specific task or unit before the teaching-learning process commences.

On the secondary level, there are two factors which are important in each of the specific areas: understanding and provisions for individual differences. It is essential that the secondary teacher

understand the psychological and sociological nature of retardates and accept them as individuals. If the secondary teacher can accomplish the understanding and acceptance, individualizing instruction can be easier and more effective. The secondary teacher must start with each child <u>where the child is</u>; not where the teacher would like for the retarded child to be. It is possible to sum up the needs of all retarded children in four words: readiness, understanding, acceptance, and individuality.

V. HOW CAN THE PROGRESS OF THE EDUCABLE MENTALLY RETARDED BE EVALUATED?

Reporting the progress of educable mentally retarded children is a task which requires much consideration. Like any reporting procedure, grading the retarded should be based upon at least three standards: (1) reporting should be in terms which everyone involved can understand, (2) reporting should result in a constructive reaction on the part of those involved, and (3) the criteria upon which the grades are based should be directly related to the program designed for the retarded child.

Reporting is a means of communicating to parents, other teachers, and the child. It is essential that the report be understandable to these people. A report containing terms understood only by educators is of little use to the parents and the retarded student. This tends to be the case with most of presently-used report cards. Oral reports are necessary in order to communicate to everyone involved the progress that has been made and areas which need more effort. A parent-teacher conference is believed to be the best way to reach parents, but it may have to take place in the home, since many parents from low socio-economic backgrounds will not come to school.

A report must leave the student with a positive attitude. A report which does nothing more than discourage and deflate a retarded child would have been better undone. The purpose of a report is not merely evaluation. It is especially true with the educable mentally retarded and with slow learners that the report should be as much as possible a reinforcing and supporting agent.

The criteria for measuring the growth and development of a retarded child should be in terms of that particular child's own

personal growth. Robert D. Strom expresses this idea when he says:

> Tradition has dictated that pupils should be measured by comparison with others, although our knowledge of learners and the learning process has revealed that the valid measure is that which assesses the growth of an individual in relation to his previous position. Under present operation, 'achievement' in the classroom is communal not personal. (39:20)

Competition as a motivator should be avoided in working with the educable mentally retarded. Too often competition becomes a daily punishment for those of lesser ability. The only competition with which a retarded child should have to cope is the point at which he begins.

Promotion of the educable mentally retarded requires sound judgement. Promoting in the traditional manner cannot apply to retarded children. The educable mentally retarded adjust more readily and progress more satisfactorily when they are placed in a group of children who have education needs similar to their own. (15:277-297)

This type of "promotion" is difficult to communicate to parents. Only a strong link of understanding between the parents and teachers of the educable mentally retarded can lead to adjustments advantageous to the growth of these children. A school faculty (including administration) which is sensitive to the needs of retarded children will make every effort to communicate to the parents that retaining a retarded child at a particular grade level is not necessarily a "failure." The child's report should reflect the fact that retention in this case is not a failure. The single most vital factor in considering the promotion of a retarded child (indeed, any child) is "What will benefit this particular individual to the greatest degree?"

VI. WHAT FEDERAL ACTIVITY AIDS IN THE EDUCATION OF THE EDUCABLE MENTALLY RETARDED?

Through federal legislation, attention and funds have been brought to bear on education for retarded children. Attention and funds are especially in demand since the cost of educating a handicapped child is from two to four times as great as the cost of educating an average child. (13:2) Facilities and teachers are both in demand, but teachers are in especially short supply. The U. S. Office of Education estimates that there are between 50,000 and 60,000 special education teachers in the United States. The need is in the neighborhood of 200,000 special education teachers.

Following is a short summary of some of the more recent federal legislation in favor of education for the mentally retarded: 1957 - The Cooperative Research Program of the U. S. Office of Education - One million dollars was appropriated for research. Two-thirds of the one million dollars went to mental retardation. Eight million dollars has been appropriated since the original appropriation. 1959 - Public Law 85-926 - One million dollars per year was appropriated to train teachers of handicapped youth. Through 1964, 835 fellowships had been granted. 1963 - Public Law 88-156 - Maternal and Child Health and Mental Retardation Planning Amendments of 1963 - The legislation provided funds for states to plan comprehensive programs for the mentally retarded, provided project grants for maternal and infant care, increased maternal and child health services, and provided grants for research.
1963 - Public Law 88-164 - Mental Retardation Facilities and Community Mental Health Centers Construction Act - The legislation provided 329 million dollars over a five-year span. The act provides for construction of research centers and facilities relating to mental retardation,

for construction and establishment of community mental health centers, for the training of teachers of handicapped children, and for research and demonstration in the education of handicapped children.

1964 - Public Law 88-452 - Economic Opportunities Act. The estimated budget for this legislation in 1966 was 1½ billion dollars. The act includes at least two important implications for the mentally retarded. Project Head Start and the Work-Experience Program. Both of these programs aid the mentally retarded. Project Head Start provides financial assistance for communities to organize and operate preschool programs which create an environment to develop children to their full potential. The Work Experience Program provides funds for projects to help unemployed fathers and needy persons, including the retarded, to gain work experience and job training. (13:1-4)

1965 - Public Law 89-10 - The Elementary and Secondary Education Act of 1965 - This legislation, in five titles, supports education for retarded children. Following are the titles and their specific application for education of retarded children:

Title I - Financial Assistance to Local Education Agencies for the Education of Children of Low Income Families.

a. Inservice training for teachers.
b. Supervisory personnel and full-time specialists for improvement of instruction and to provide related pupil services.
c. Institutes for training teachers in special skills.
d. Employment of consultants for improvement of programs.
e. Supplementary instructional materials.
f. Special classes for physically handicapped, disturbed, and socially maladjusted children.
g. Preschool training programs.
h. Special audiovisuals for disadvantaged children.
i. Increased guidance services for pupils and families.
j. Early identification of gifted and handicapped among the disadvantaged.

k. School health, psychiatric, and psychological services.
l. Summer programs for development of language skills.

Title II - School Library Resources, Textbooks, and Other Instructional Materials - This section of the act provides textbooks, library materials, and audiovisuals and specialized material for all children including exceptional children.

Title III - Supplementary Educational Centers and Services - Specialized instruction and equipment for students interested in studying advanced scientific subjects, foreign languages, and other academic subjects which are not taught in the local schools or which can be provided more effectively on a centralized basis, or for persons who are handicapped or of preschool age.

Title IV - Educational Research and Training - This section provides for an extension of the Cooperative Research Act. It provides for additional research and demonstration centers similar to four already in operation. This portion of the act "also provides additional funds for research projects and gives to the Cooperative Research Program an extensive responsibility for the dissemination of research findings."

Title V - Grants to Strengthen State Departments of Education - This section of the act provides for such services from the state as consultative and technical assistance services relating to particular aspects of education such as the education of the handicapped. (2:7)

VII. SUMMARY

The educable mentally retarded are in desperate need of help. Many of these children are ignored and even shunned because of misunderstandings. Since 4% of the population of the United States is made up of the educable mentally retarded and youngsters of this nature are found in nearly every public school, classroom teachers have an obligation to understand and aid these children. Some of the questions that might naturally arise in a regular classroom teacher who deals with the educable mentally retarded are: "Who are the educable mentally retarded?" "How can they be identified?" "How can I help them?" "How can I evaluate their progress?" "Is the federal government helping?" "Just what are we trying to accomplish with these children?"

The educable mentally retarded are generally identified by means of intelligence tests. IQ scores of 50 to 75 indicate the educable mentally retarded; scores of 75 to 90 identify the slow learner. Other means of identification are used by the medical profession (cause of defect), sociologists (degree of adjustment), and some educators (ability to profit from school programs.)

Some characteristics of the educable mentally retarded (and slow learners to some degree) are: (1) Detection in preschool years is difficult.

(2) Physically, the educable mentally retarded vary only slightly from the norm.

(3) IQ tests are still one of our most valuable tools for identifying the educable mentally retarded.

(4) Educable mentally retarded children learn in about the same way

as other children of the same mental age.

(5) Some of the psycho-educational problems which are present in the educable mentally retarded are poor retention, lack of ability to handle abstract materials, short attention span, and a lack of imagination and creativity.

(6) The individuals within the group termed "educable mentally retarded" vary widely within a single characteristic. The combinations of these differing traits produces individuals of a quite heterogeneous type.

The most vital factor for the classroom teacher in helping the educable mentally retarded is attitude. All of the technique and all of the materials known to education will not help retarded children unless the teacher has attitudes that allow him to cooperate with other people, to resist those pressures which would be detrimental to the program, and above all to accept the retarded child as a human being with inherent worth in every facet of his life.

There are many techniques and precedures which have proven useful in teaching the educable mentally retarded. Some of the techniques apply more readily to certain specific areas than to others. Those techniques which all areas have in common are:

(1) Teaching should be based on the total maturity level of the individual.

(2) Quality of instruction is as important as quantity of instruction.

(3) Verbal symbols should be used whenever possible.

(4) Allow plenty of time for concept and generalization development.

(5) A number of approaches are better than reliance upon a single approach.

(6) Exploration is a valuable teaching tool for the retarded.

(7) Audio-visual aids are especially useful in teaching retarded children.

(8) Introduction of only a few rules or directions at a given time is superior to the introduction of many rules or directions.

(9) Close attention to the development of sound mental health habits by the educable mentally retarded i: necessary.

Reporting the progress of the mentally retarded is a difficult task for the regular classroom teacher. The difficulty is related to the choice of creteria upon which progress is to be measured. Tradition pressures the teacher to measure even retarded children against the norm for all children. This is a dangerous procedure for any child; it is especially hazardous for a mentally retarded child. To be consistent in efforts to help the individual child, retarded or normal, the criterion for reporting should be "Where was the child when he started?" and "Where is he now?" All facets of growth and development should be considered, not intellectual development alone.

The federal government has long been interested in education for retarded children. The most recent and far reaching legislation pertaining to the educable mentally retarded are the Maternal and Child Health and Mental Retardation Planning Amendments of 1963, the Mental Retardation Facilities and Community Mental Health Centers Construction Act of 1963, the Economic Opportunities Act of 1963, and the Elementary and Secondary Education Act of 1965.

Consideration for what is best for the individual child should be primary when promotion time arrives. Generally, retarded children show more satisfactory growth when they are placed in a group of

children with the same mental age as themselves. Continuous reporting procedures can eliminate problems and create understanding with the parents when promotion time comes around.

The aims of education for retarded children are not clearly defined. The philosophies seem to be divided between personal satisfaction and adjustment to society. The answer probably lies in the middle of these two goals. There is a trend toward aiming education of retarded children toward persistent life problems. If educators can help retarded children see themselves as individuals of worth who can lead lives that are satisfying and useful, then their adaptation to society as a whole shall be a manifestation of this help. Until enough special education teachers are prepared to take care of the educable mentally retarded, the job shall fall in most cases to the regular classroom teacher. It shall be the teacher's job to learn the nature of the retarded child, to learn how the retarded child can be helped, and then roll up his sleeves and go to work.

The regular classroom teacher should realize that he is ill-prepared to do this work. It is not the first time in history that the classroom teacher has been called upon to do something for which he is not prepared. But, if the teacher follows the pattern of what classroom teachers have done before, he shall meet the challenge, and the educable mentally retarded and the slow learners shall profit from the effort.

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